

**REMARKS**

Claims 1-6 are pending in this application. By this Amendment, claims 1 and 2 are amended. The amendments introduce no new matter. Figs. 11 and 12 are amended with the inclusion of the attached Replacement Drawing Sheets. Claim 7 is canceled without prejudice to, or disclaimer of, the subject matter recited in that claim. Reconsideration of the application based on the above amendments and the following remarks is respectfully requested.

The Office Action, in paragraph 1, makes final the Restriction Requirement. Claim 7 is canceled as drawn to a non-elected group of claims.

The Office Action, in paragraph 2, objects to the drawings as failing to comply with 37 C.F.R. §1.84(p)(5) because the drawings are alleged to include reference characters that are not mentioned in the description. Specifically, reference character 72 in Figs. 11 and 12 is not described in the specification. Figs. 11 and 12 are amended with the inclusion of the attached Replacement Drawing Sheets to remove element number 72. Withdrawal of this objection to the drawings is respectfully requested.

The Office Action, in paragraph 3, objects to the drawings indicating that Figs. 13A and 13B should be designated by a legend. The Office Action misconstrues Applicants' disclosure in the paragraph beginning on line 17 of page 19. This description does not imply that the depictions in Figs. 13A and 13B describe what can, in any manner, be considered to be known in the art. Rather, Figs. 13A and 13B represent at least an initial step in the formation of the connections that are specifically the subject matter of the pending claims. Withdrawal of this objection to the drawings is respectfully requested.

The Office Action, in paragraph 5, rejects claims 1-4 and 6 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,471,368 to Downie et al. (hereinafter "Downie"). The Office Action, in paragraph 7, rejects claim 5 under 35 U.S.C. §103(a) as being

unpatentable over Downie in view of U.S. Patent No. 6,116,916 to Kasai. These rejections are respectfully traversed.

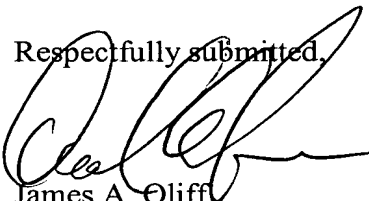
Downie teaches a direct attach module chip for bonding to an electronic circuit assembly by connection pads formed by drilling a panel and filling edge portions with electrically conductive media (Abstract). The Office Action, with reference to at least Figs. 4 and 5 of Downie, indicates that Downie is alleged to teach the combinations of features recited in independent claims 1 and 2. The analysis of the Office Action fails for at least the following reasons.

Downie at col. 4, lines 4-17, indicates that holes (vias 50) are formed in a panel and then filled with an electrically conductive material, the panel being routed or diced or excised or cut, cutting the filled via typically in half. The electrically conductively filled vias of Downie cannot reasonably be considered to teach, or even to have suggested, a cut which is open sideways and is coated with a generally semi-circular conductor layer in such a manner that an inner side surface of the cut is covered with the conductor layer, an inner circumferential surface of the conductor layer is connected to a circuit that is incorporated in the control circuit board, as is recited, among other features, in the independent claims. Rather Downie shows a portion of the electrically conductive material that fills the vias at, for example, a bottom surface being set on a top surface of a circuit.

For at least this reason, Downie cannot reasonably be considered to teach, or to have suggested, the combinations of all of the features recited in independent claims 1 and 2. Further, claims 3-6 are also neither taught nor would they have been suggested, by Downie, even in combination with Kasai, for at least the respective dependence of these claims directly or indirectly on an allowable independent claim 2, as well as for the separately patentable subject matter that each of these claims recites.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-6 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,  
  
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JAO:DAT/cfr

Attachment:  
Replacement Drawing Sheets (Figs. 11-13)

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**Amendments to the Drawings:**

The attached replacement drawing sheets makes changes to Figs. 11 and 12 and replace the original sheets with Figs. 11-13.

Attachment: Replacement Sheets